

Abstract

A sensor element for determining a physical property of a test gas, e.g., the concentration of a gas component in a gas mixture, in particular the oxygen concentration in the exhaust gas from internal combustion engines, has a solid electrolyte body, an external electrode exposed to the test gas situated on the solid electrolyte body, an internal electrode situated in the solid electrolyte body, and an electrical resistance heater which has a meandering heating surface situated in the solid electrolyte body, and is embedded in insulation. The external electrode is situated in a cavity formed in the solid electrolyte body to reduce the heat losses from the sensor element due to convection and radiation to the cold test gas flow.

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